

RESOURCE PACKET

Assessment of Autism



Background Information

Autism is often referred to as a spectrum disorder, meaning the symptoms and characteristics can present themselves in a wide variety of combinations from mild to severe. Two children, both with a diagnosis of autism, can act very differently from one another. Throughout this chapter, the term ASD (autism spectrum disorder) will be used in place of autism. ASD may also be used synonymously with Pervasive Developmental Disorder. Both refer to a wide continuum of associated cognitive and neurobiological disorders, including, but not limited to, three core-defining features: impairments in socialization, impairments in verbal and non-verbal communication, and restricted and repetitive patterns of behaviors (American Psychiatric Association, 1994; Filipek, 1999). According to the *Diagnostic and Statistical Manual of Mental Disorders IV (DSM IV) (1994)* which is used for the purpose of diagnosis within medical and mental health community, the term Pervasive Developmental Disorder (PDD) is not a specific diagnosis, but an umbrella term under which the following specific diagnosis are identified: Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS), Rett's Disorder, Childhood Disintegrative Disorder, Autistic Disorder, and Asperger's Disorder.

Arriving at the diagnosis of Autism/PDD typically involves experienced professionals gathering information about the child's behavior from the parents and from direct observation of the child. The current criteria for diagnosing Autism Spectrum Disorders are those given in the American Psychiatric Association's Diagnostic and Statistical Manual (DSM-IV). The formal diagnosis of autism should be made by clinicians experienced in the diagnosis and treatment of autism. Clinicians must rely on their clinical judgment, aided by guides to diagnosis, such as DSM-IV, as well as results of various assessment instruments, rating scales and checklists.

Establishing a diagnosis is only one part of a comprehensive multidisciplinary evaluation for a child with possible ASD who may be eligible for special education and related services. There is no single way that autism is first identified in young children. The process of identification and diagnosis will vary depending on the individual child. In addition the sequence in which components of the evaluation process are done will vary.

One of the recent developments in the field of autism is an increasing ability to recognize this disorder at an early age. In most cases, a young child (under the age of three) with autism can now be recognized by difficulties in orienting to social stimuli, diminished social gaze, and impairments in the areas of shared attention and motor imitation that accompany the language delays that are generally present. It can be difficult to make a definitive diagnosis at an early age in some children. It is not yet known with certainty just how early the diagnosis can be made with high reliability or whether very early diagnosis is accurate or predictive over time. Multiple observations may be required, sometimes over an extended period of time, to confirm the diagnosis of autism. The use of a differential diagnosis, that is a tentative diagnosis, may be

appropriate with very young children, in cases where the characteristics of autism are not able to be documented across settings, or when there has not been sufficient time for a more conclusive diagnosis. These children may be eligible for service as language impaired or developmentally delayed. This should not serve as a delay to providing appropriate services to the child, as children are served based on their individually identified needs.

The diagnosis of autism should include the use of diagnostic instruments and/or structured observation tools that were developed specifically for ASD. A list of such instruments is included in the appendix of this document.

Child Find

Each local school system shall develop and implement procedures for creating public awareness of special education programs and services. This includes a comprehensive system of child find activities for all children suspected of having a disability in public and private schools and facilities.

The Referral Process

Step 1: Referral

Each local school system shall develop an organized referral process, communicated to all school personnel, parents, and persons within the community, for conducting evaluations for children who may be eligible for special education. Systematic procedures should be in place to ensure that attempts have been made to meet the needs of the child within the regular school program prior to referral for special education. For a child not yet enrolled in school, the school system shall document interventions attempted in the environment that is natural for that child, i.e., home, child-care, nursery school, etc. It is recommended that interventions be tried over a reasonable period of time. This procedure must not be used to delay the referral and assessment of a child suspected of a disability such as autism spectrum disorder. When there is failure to achieve success with pre-referral interventions, or the referral information is substantial, a referral for a comprehensive evaluation is made.

For children served in Tennessee's Early Intervention System, specific collaborative referral procedures are in place, which provide for coordinated transitions from one system to another, for children who are eligible for special education and related services. These services may be provided to children eligible for special education, who are not yet three (3) years of age, under early transition agreements.

The referral process is the first step in the evaluation/assessment process. Any child suspected of having a disability may be referred to the local school system. For a child less than school age, birth through two, until the third birthday, referrals should be made to Tennessee's Early Intervention System. All school referrals should be made in writing to the school principal or the special education administrator. The local school

system will implement established written procedures for processing referrals. Parents must provide informed written consent for the evaluation.

Step 2: Review Existing Data

The child's parents, teachers and other qualified professional personnel as appropriate, shall be part of the assessment process to evaluate the child. The comprehensive evaluation shall be an in-depth assessment of all areas of suspected physical, cognitive and social/emotional disability. Attempts to gather all relevant educational, functional, and developmental information that adversely affects the child's educational performance and progress in the general curriculum (for a preschool child, to participate in appropriate activities) shall be documented. As part of the initial evaluation, and, if appropriate, as part of any reevaluation, the IEP team shall review existing data concerning the child, including

1. Evaluations and information provided by the parents
2. Current classroom/developmental based assessments and observations
1. Observations by teachers and other related service providers

After reviewing the existing data, the IEP team will determine what additional data, if any, is needed to determine:

1. Whether the child meets eligibility standards as a child with Autism Spectrum Disorder
2. The present levels of performance and educational needs of the child
3. The need for special education
4. Modifications needed to access the general curriculum

Step 3: Multidisciplinary Evaluation

Children who are suspected to be eligible for special education services for Part B of IDEA must receive a multidisciplinary evaluation. Tests and other evaluation materials are selected and administered so as not to be discriminatory on a racial or cultural basis, and are provided and administered in the child's native language or other mode of communication. A variety of evaluation tools are used to gather relevant functional and developmental information about the child, including information from the parent(s). Evaluation tools are validated for the purpose for which they will be used, and are administered by qualified personnel. No single procedure is used as the sole criterion for determining whether a child is a child with a disability. The evaluation covers all areas related to the suspected disability, including, if appropriate, health, vision, hearing, social and emotional status, general intelligence or cognitive ability, communication and motor abilities. The evaluation for eligibility for a child suspected of having ASD must include:

1. Parent interviews including developmental history
2. Behavioral observations in two or more settings (which may be two or more settings in the school)
3. Physical and neurological information from a licensed physician
4. Evaluation of speech/language/communication skills, cognitive/developmental skills, adaptive behavior skills and social skills, and

5. Documentation of how ASD adversely affects educational performance in the classroom or learning environment.

Determination of Eligibility

Upon completion of the evaluation/reevaluation, an IEP team must determine if the child is eligible for special education. In interpreting the evaluation data for the purpose of determining if a child is eligible for special education, the school system shall draw upon information from a variety of sources including aptitude and achievement tests, parent input, teacher recommendations, physical condition, social or cultural background and adaptive behavior, and ensure that the information obtained from all of these sources is documented and carefully considered. If it is determined through an appropriate evaluation that a child has ASD, but only needs a related service and not special education, the child is not a child with a disability under IDEA or state guidelines. “Special Education” means specially designed instruction to meet the unique educational needs of the student, and includes speech-language services. The determination of eligibility shall be made by the IEP team. The school system must provide a copy of the evaluation/reevaluation report and determination of eligibility to the parent.

DSM-IV Diagnostic Criteria for autism spectrum disorders is available in Appendix B. Educational assessment specialists should become familiar with the diagnostic criteria used for diagnosis of autism spectrum disorder within the medical community in order to appropriately evaluate autism spectrum disorder when considering educational eligibility.

GUIDELINES FOR EVALUATION

Procedures in Determination of Eligibility

Diagnostic evaluations must include all areas of suspected disability; in-depth evaluation of social skills, communication skills, behavior, response to sensory stimuli, adaptive behavior and educational need. In addition, diagnostic evaluations may also include factors that are not specific to autism, such as—overactivity, aggression, anxiety, depression, or specific learning disabilities, which may significantly affect the outcome and educational intervention for the child.

The diagnosis of autism should include the use of diagnostic instruments with at least moderate sensitivity and good specificity for autism. Sufficient time should be planned for standardized parent interviews regarding current concerns and behavioral history related to autism, and direct, structured observation of social and communication behavior and play. The evaluation of younger children focuses on abilities in the five developmental domains (cognitive, communication, motor, adaptive, and social/emotional), whereas the evaluation of older children may include a focus on educational ability, skills and performance.

Procedures used in the evaluation and eligibility determination of autism should include at a minimum:

1. **Parent interviews including developmental history** should focus on strengths and needs of the child in the following areas:

- Developmental rates and sequences
- Response to sensory stimuli
- Cognitive function
- Functional communication (verbal and nonverbal)
- Adaptive and behavioral skills (including response to disciplinary methods)
- Social skills
- Educational performance, and
- Parent concerns.

Such interview instruments include the Gilliam Autism Rating Scale (GARS), the Parent Interview for Autism (PIA), the Pervasive Developmental Disorders Screening Test – Stage 2 (PDDST), or the Autism Diagnostic Interview-Revised (ADI-R) Autism Screening Scale.

2. **Behavioral observations in two or more settings**, in environments that are natural and appropriate for the child, documenting the atypical behaviors. Observation in structured and unstructured settings is recommended. Structured interaction observation instruments may be used and include the Screening Tool for Autism in Two Year Olds (STAT), and the Autism Diagnostic Observation Schedule- Generic (ADOS-G). An observational rating scale such as the Childhood Autism Rating Scale (CARS) can also be used to document behavior across settings.

3. **Physical and neurological information from a licensed physician** who may be a pediatrician, primary care physician, or neurologist, who is aware of the suspected condition of autism and can provide information about the child's general health and neurological functioning. The purpose of this information is for the physician to evaluate and rule out the possibility of other health conditions that may impact the child's behavior. Further referrals for medical diagnostic information and/or medical treatments are not the responsibility of the LEA.

4. Evaluation of speech/language/communication skills, cognitive/developmental skills, adaptive behavior skills, social skills.

a. Speech/Language and Communication

1) A functional communication assessment that addresses the following areas is recommended:

- The child's ability to convey his/her needs and desires
- The child's spontaneous use of verbal and nonverbal forms of communication
- The child's ability to use his/her language/communication skills in a variety of social settings with a variety of interactive partners.

2) Evaluation of phonology, morphology, syntax, semantics, and pragmatics. Options of testing instruments include the Rosetti, the Test of Pragmatic Skills, the Preschool Language Scale the SCID-R, the EASIC, the CSBS, the REEL-2, the TELD-3, and the Early Language Milestone Scale-2nd edition.

b. Cognitive/Developmental Skills

Cognitive and developmental assessment should include information about non-verbal reasoning, attention, problem solving and verbal reasoning. For young children the focus should be on the five developmental domains (cognitive, communication, motor, adaptive, and social/emotional). Cognitive assessments instruments include Mullins Scales, Bayley Scales of Infant Development, Stanford-Binet IV, Differential Ability Scales, K-ABC, and the Wechsler Scales (WISC-III and WPPSI-R). For some students non-verbal cognitive measures may be more appropriate than language based measures. Non-verbal cognitive assessments may include the C-Toni, and the Leiter battery. Developmental assessments may include Battelle, etc. Cognitive scores should be interpreted cautiously because they may be affected by the behavior of the child, the choice of test, the testing strategies employed and the variability in abilities across different cognitive domains. For older children more traditional cognitive/intelligence and academic achievement measures may be appropriate. All tests should be selected and administered to accurately reflect the child's aptitude, and the results confirmed by other sources of information and informants. All tests should be selected and administered to accurately reflect the child's aptitude, and the results confirmed by other sources of information and informants.

c. **Adaptive Behavior**

Adaptive behavior skills include the ability to care for oneself, to function independently in the home, school and community, and to conform to societal rules and expectations. Ratings, observation and interviews may be used to measure adaptive skills. Some of the instruments used in the assessment of adaptive behavior include the Vineland Adaptive Behavior Scale and the Scales of Independent Behavior.

d. **Social Skills**

Social skills are the child's ability to interact in a socially acceptable and appropriate manner. Depending on the age of the child this may include cooperative play, empathy for others, understanding feelings of others, appropriate sharing of interests, reciprocal conversations, following social routines, forming and maintaining relationships, understanding cause and effect in interpersonal situations, participation in social activities with peers. Some of the instruments used to evaluate social skills include Vineland Adaptive Behavior Scale, the Vineland Social Emotional Early Childhood Scales, and the Social Skills Rating Scales.

e. **Documentation and assessment of how autism adversely affects educational performance in the classroom or learning environment.**

Aspects of autism which may adversely affect educational performance may include difficulty with social interactions, difficulty in communication, need for routine and/or difficulty in adapting to change, and sensory sensitivity. Academic assessments may be used in addition to observations to determine the extent to which educational performance is affected. As with every disability category, the IEP team must assess and document and then determine how autism adversely affects the individual child's educational performance in the classroom or learning environment.

Socioemotional Dimensions in Communication Autism Questionnaire

Student name _____ Completed by _____ Date _____

SOCIAL RELATEDNESS

Social and communicative motivation

- ☐ Student typically prefers to be in proximity of others.
- ☐ Student typically prefers to be alone.
- ☐ Student responds to and initiates social games and routines.
- ☐ Student visually orients to others (face to face gaze).
- ☐ Student regularly uses gaze shifts to reference the attention of others

Frequency of communicative acts directed to adults and other children:

Joint attention

- ☐ Student follows adults' visual line of regard. _____
- ☐ Student observes adults' or other children's activity. _____

Student communicates to establish joint attention verbally by (*Check appropriate communicative functions.*):

- ☐ commenting,
- ☐ requesting information, and/or
- ☐ providing information.
- ☐ Student responds to the preverbal or verbal signals of others to establish shared attention.
- ☐ Student is able to maintain and follow-up on topics introduced by others (for older students).

Social imitation

- ☐ Student imitates actions with some evidence of social orientation (e.g., gaze checks, sharing of affect, verbal communication).
- ☐ Student imitates vocalizations with some evidence of social orientation.
- ☐ Student imitates verbalizations with some evidence of social orientation.

EMOTIONAL EXPRESSION AND RELATEDNESS

Attachment:

- ☐ Student uses caregivers as a base for security and emotional "refueling."
- ☐ After a reasonable period of time, student sees other adults (e.g., teacher, paraprofessional, etc.) as a base of security.

Functional Expression

- ☐ Student expresses different emotions through facial expression, vocalization, and/or verbalizations that are appropriate to the situational and interpersonal context. (Circle appropriate choices.)
- ☐ Student shares emotional states by directing affect displays to others.
- ☐ Student understands and responds appropriately to the emotional expressions of others

Empathy

- ☐ Student demonstrates concern for or actively attempts to soothe another student who has been hurt or is otherwise in distress.

SOCIABILITY IN COMMUNICATION

Student communicates for the functions of:

- ☐ Behavioral regulation (i.e., requesting objects/actions, protesting).
- ☐ Social interaction (i.e., greeting, calling, requesting social routine, requesting comfort).
- ☐ Joint attention (i.e., commenting, requesting and providing information).

If student communicates primarily for behavioral regulation, this may be indicative of limited sociability in communication.

EMOTIONAL REGULATION AND COMMUNICATIVE COMPETENCE

- ☐ Communicative competence varies significantly with different communicative partners.
- ☐ **Communicative competence does not vary significantly with different communicative partners.**
- ☐ Communicative competence varies significantly in comfortable, familiar contexts as opposed to unfamiliar emotionally arousing contexts.
- ☐ **Communicative competence does not vary significantly in comfortable, familiar contexts as opposed to unfamiliar emotionally arousing contexts.**
- ☐ Student demonstrates self-regulatory strategies to modulate arousal.
Explain: _____
- ☐ Student demonstrates mutual regulatory strategies.
Explain: _____

How does degree of emotional arousal (positive or negative) influence communicative competence (e.g., student withdraws; speech becomes disorganized; student uses developmentally less sophisticated means etc.)?

What are the most effective means others can use to help the student modulate extreme states of arousal?

EXPRESSION OF EMOTION IN LANGUAGE AND PLAY

- ☐ Student uses vocabulary to talk about emotional states (self or other).
- ☐ Student uses emotional themes consistently in play, and they are an attempt to understand stressful life events

Additional comments:

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Technical Assistance Manual on Autism for Kentucky Schools. 1997. Office of Learning Programs Development and Office of Special Instructional Services, Kentucky Department of Education.

What We Are Learning About Autism/Pervasive Developmental Disorder: Evolving dialogues and approaches to promoting development and adaptation. 1998. Contract Consultants, Temple University Institute on Disabilities/University Affiliated Program.

DSM-IV DIAGNOSTIC CRITERIA

DSM-IV Diagnostic Criteria—Asperger's Disorder

- A. Qualitative impairment in social interaction, as manifested by at least two of the following:
 - 1. marked impairment in the use of multiple nonverbal gestures such as eye-to-eye gaze, facial expression, body posture, and gestures to regulate social interaction
 - 2. failure to develop peer relationships appropriate to developmental level
 - 3. lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g. by a lack of showing, bringing, or pointing out objects of interest)
 - 4. lack of social or emotional reciprocity
- B. Restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:
 - 1. encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus
 - 2. apparently inflexible adherence to specific, nonfunctional routines or rituals
 - 3. stereotyped and repetitive motor mannerisms (e.g. hand or finger flapping or twisting, or complex whole body movements)
 - 4. persistent preoccupation with parts of objects
- C. The disturbance causes significant impairment in social, occupational, or other important areas of functioning
- D. There is no clinically significant general delay in language (e.g. single words used by age 2 years, communicative phrases used by age 3 years)
- E. There is no clinically significant delay in cognitive development or in the development of age-appropriate self-help skills, adaptive behavior (other than social interaction), and curiosity about the environment in childhood
- F. Criteria are not met for another specific Pervasive Developmental Disorder or Schizophrenia

DSM-IV Diagnostic Criteria—Pervasive Developmental Disorder-Not Otherwise Specified (including atypical autism) (PDD-NOS)

This category should be used when there is a severe and pervasive impairment in the development of reciprocal social interaction or verbal and nonverbal communication skills, or when stereotyped behavior, interests, and activities are present, but the criteria are not met for a specific Pervasive Developmental Disorder, Schizophrenia, Schizotypal Personality Disorder, or Avoidant Personality Disorder. For example, this category includes “atypical autism” – presentations that do not meet the criteria for Autistic Disorder because of age of onset, atypical symptomatology, or subthreshold symptomatology, or all of these.

DSM-IV Diagnostic Criteria—Rett’s Disorder

- A. All of the following:
 - 1. apparently normal prenatal and perinatal development
 - 2. apparently normal psychomotor development through the first five months after birth
 - 3. Normal head circumference at birth
- B. Onset of the following after the period of normal development:
 - 1. deceleration of head growth between ages of five and 48 months
 - 2. loss of previously acquired purposeful hand skills between ages of five and 30 months with the subsequent development of stereotyped hand movements (e.g. hand-wringing or hand-washing)
 - 3. loss of social engagement early in the course (although often social interaction develops later)
 - 4. appearance of poorly coordinated gait or trunk
 - 5. severely impaired expressive and receptive language development with severe psychomotor retardation

DSM-IV Diagnostic Criteria—Childhood Disintegrative Disorder

- A. Apparently normal development for at least the first two years after birth as manifested by the presence of age-appropriate verbal and nonverbal communication, social relationships, play and adaptive behavior.
- B. Clinically significant loss of previously acquired skills (before age ten years) in at least two of the following areas:
 - 1. expressive or receptive language
 - 2. social skills or adaptive behavior
 - 3. bowel or bladder control
 - 4. play
 - 5. motor skills

- C. Abnormalities of functioning in at least two of the following areas:
 - 1. qualitative impairment in social interaction (e.g. impairment in nonverbal behaviors, failure to develop peer relationships, lack of social or emotional reciprocity)
 - 2. qualitative impairments in communication (e.g. delay or lack of spoken language, inability to initiate or sustain a conversation, stereotyped and repetitive use of language, lack of varied make-believe play)
 - 3. restricted, repetitive and stereotyped patterns of behavior, interests and activities, including motor stereotypes
- D. The disturbance is not better accounted for by another specific Pervasive Developmental Disorder or by Schizophrenia

Assessment Instruments for Evaluation of Autism Spectrum Disorder

The list of assessments that follow are not comprehensive and do not necessarily reflect the most recently standardized instruments or tools for assessment of Autism Spectrum Disorder. A more comprehensive list of assessment instruments can be found on the Special Education Assessment web page under the title of Assessments in Easy IEP on the Initial Eligibility tab at the following site:

<http://state.tn.us/education/speced/seassessment.shtml#INITIAL>

Battelle Developmental Inventory (BDI)

- **Authors:** J. Newborg, J.R. Stock & J.Wnek (initial development); J.Guidubradi (pilot norming study); J.S. Svinicki (completion and standardization)
- **Year:** 1988
- **Assessment type:** Norm based/curriculum compatible; used for diagnosis, evaluation; and program development
- **Ages:** Birth to age 8
- **Domains:** Personal-Social, Adaptive, Motor, Communication, and Cognitive
- **Adaptations:** General adaptations for various disabilities; standardized stimulus/response options for visual, hearing, neuromotor, and behavior/emotional disorders included in most items.
- **Scores:** Domain scores (developmental age, z-score, developmental rate, normal curve equivalent, percentile), standard scores; and age equivalents
- **Standardization:** Stratified random sampling, within the guidelines of the US census, was used to select the norming sample, which was administered to more than 800 children.
- **Validation:** BDI reports adequate reliability, and initial validity studies show significant correlation between the BDI and a variety of measures, such as Stanford-Binet Form L-M. A weak correlation was observed between the BDI and the WISC-R Full Scale IQ. There has been a recent criticism about the use of the BDI as a norm-referenced measure for special services eligibility because of difficulty calculating extreme standard scores in a reliable fashion. The BDI received higher marks for use as a criterion referenced measure. (Wodrich, 1997)
- **User Qualifications:** It is primarily designed for use by infant, preschool, and primary teachers as well as by special educators. Speech pathologists, psychologists, adaptive physical education specialists, and clinical diagnosticians will also find the BDI effective in measuring the functional abilities in young disabled and nondisabled children. Although appropriate for nonpsychologist, supervised practice in administration for preschoolers with disabilities is critical. (Bagnato, 1997)
- **Ordering information:** Riverside Publishing
425 Spring Lake Drive
Itasca, IL 60143-2079
800/323-9540 (orders)
800/767-8420 (general business)

Bayley Scales of Infant Development, 2nd Edition (BSID-II)

- Author: Nancy Bayley
- Year: 1993
- Assessment Type: Standardized norm-referenced assessment of cognitive and motor development used to identify children who are developmental delayed, to chart a child's progress after initiation of an intervention program, as a tool for teaching parents about their infants development; and as a research tool.
- Ages: 1 to 42 months
- Domains: Mental Scale; Motor Scale; and Behavior Rating Scale
- Scores: Standard scores; scaled scores;
- Standardization: Renormed on stratified sample of 1700 children reflecting geographic and cultural diversity. Data are provided for the following groups: premature infants, HIV positive, prenatal drug exposure, birth asphyxia, frequent otitis media, developmental delay, autistic, Down syndrome.
- Validation: Correlation of .57 was obtained with the Stanford-Binet for a sample of 120 (ages 24 to 30 months) children in the standardization group.
- User Qualifications: A graduate degree in Psychology, Education or closely related field that includes advanced training in the administration and interpretation of psychological tests; OR membership in a professional association that requires training and experience in the ethical and competent use of psychological tests; OR licensed or certified by an agency which does the same.
- Ordering information: Psychological Assessment Resources, Inc.
16204 N. Florida Ave.
Lutz, FL 33549
813/968-3003
800/331-8378
Fax: 800/727-9329
www.parinc.com

Communication and Symbolic Behavior Scales (CSBS)

- Authors: Amy Miller Wetherby, Barry Prizant
- Year: 1993
- Assessment Type: Standardized method of examining communicative and symbolic behaviors for the purpose of early identification of communication delays or disorders. This instrument requires an additional developmental evaluation/assessment tool to complete eligibility determination.
- Ages: Developmental: 8-24 months
Chronological: 9 months-6.0 years
- Domains: Communication functions; gestural communication means; vocal communication means; verbal communication means; reciprocity; social-affective signaling, and symbolic behavior
- Scores: Standard scores or percentile ranks may be obtained for both the clusters and a communication composite. Norms may be computed based on chronological age or language stage.
- Standardization: The norming sample consisted of approximately 280 children. The CBSC has been tested for cultural bias with African-American children.
- Validation:
- User Qualifications: Recommended that this test be given by a speech/language pathologist, early intervention professionals or other professionals trained to perform developmental
- Ordering information: Riverside Publishing
425 Spring Lake Drive
Itasca, IL 60143-2079
800/323-9540 (orders)
800/767-8420 (general business)
www.riverpub.com

Developmental Assessment of Young Children (DAYC)

- Authors: Judith K.Voress and Taddy Maddox
- Year: 1998
- Assessment Type: Developmental assessment through observation, interview of caregivers, and direct assessment. May be used in an arena assessment.
- Ages: Birth through 5 years, 11 months
- Domains: Cognition, Communication, Social-Emotional, Physical and Adaptive
- Scores: Standard scores; percentile scores and age equivalent. The test gives a General Development Quotient if all 5 subtests are completed, but all subtests can be used independently for each domain.
- Standardization: Normed on national sample of 1,269 individuals, broken into 23 age groups. Characteristics of the normative sample approximate the 1996 census.
- Validation: Reliability coefficients range from .90 to .99. Reliabilities for children identified as environmentally at-risk and biologically at-risk are .98 and .99. (PRO-ED)
- User Qualifications: Basic understanding of test and testing statistics; knowledge of general procedures governing test administration, scoring, and interpretation; and specific information about developmental evaluations.
- Ordering Information: PRO-ED
8700 Shoal Creek Blvd.
Austin, TX 78757
800/897-3202
512/451-3246
FAX: 512/451-8542
www.proedinc.com

Developmental Observation Checklist System (DOCS)

- Authors: W. P. Hresko; S.A. Miguel, R. J. Sherbenou, & S.D. Burton
- Year: 1994
- Assessment Type: A three-part inventory/checklist system with respect to general development (DC), adjustment behavior (ABC) and parent stress and support (PSSC). Provides a parent-report questionnaire.
- Ages: Birth through age 6
- Domains: Language, Motor, Social, and Cognitive
- Scores: Quotients, NCE scores, age equivalents and percentiles
- Standardization: Normed on more than 1400 children birth through age 6 from more than 30 states. Characteristics of the normative group approximate those for the 1990 Census data relative to gender, geographic region, race/ethnicity, and urban/rural residence.
- Validation: Construct validity is supported through correlations with age and group differentiation relating test items to total test scores, component intercorrelations, and cognitive aptitude. Substantial content validity and criterion-related validity is offered. (PRO-ED)
- User Qualifications: Basic understanding of test and testing statistics; knowledge of general procedures governing test administration, scoring, and interpretation; and specific information about developmental evaluation.
- Ordering Information: PRO-ED
8700 Shoal Creek Blvd.
Austin, TX 78757
800/897-3202
512/451-3246
FAX: 512/451-8542
www.proedinc.com

Infant-Toddler Developmental Assessment (IDA)

- Authors: S. Provence, J. Erikson, S. Vater, & S. Palmeri
- Year: 1995
- Assessment Type: A comprehensive, multidisciplinary, family-centered process designed to improve early identification of children who are developmentally at risk.
- Domains: Province Birth to Three Developmental Profile, IDA Parent Report, and IDA Health Recording Guide- which focus on motor, language, cognitive-adaptive, feelings, social adaptation, and personality trait domains, as well as various subdomains, and integrated developmental concerns, health concerns, and family strengths and priorities related to the IFSP.
- Ages: Birth to age three
- Scores: Percentage delay computations based on norm-based (age), but not norm groups statistics.
- Standardization: Field-validation sample: Empirical data for the Province Birth to Three Developmental Profile was gathered by analyzing results of 100 infants and toddlers, ages birth to 3 years in a IDA training center. Test results were gathered from the IDA assessment administered by IDA practitioners at 23 different service agencies.
- Validation: Reliability coefficients for the Province domain scores generally range from .90 to .96 for ages 1-18 months and .78 to .96 for ages 19-36 months. Interrater reliabilities range from .91 to .95 for seven of the eight domains.
- Format: Parent Report is available in Spanish.
- User Qualifications: The professionals should have core knowledge of the basic skills necessary to conduct the IDA. All practitioners who have completed basic academic and clinical programs can incorporate IDA into their practice. Practitioners can be from the following professions: child development specialists; child psychiatrists; early childhood special educators; early intervention professionals; nurses, and nurse practitioners; occupational therapists; physical therapists, physicians; physician assistants; psychologists; school psychologists; social workers; speech and language pathologists; audiologist
- Ordering information: Riverside Publishing
425 Spring Lake Drive
Itasca, IL 60143-2079
800/323-9540 (orders) OR 800/767-8420 (general business)

MacArthur Communicative Development Inventories (CDI)

- Authors: L. Fenson, P. S. Dale, J. S. Reznick, D. Thal, E. Bates, J. P. Hartung, S. , Pethick, J. S. Reilly
- Assessment Type: Parent completed, standardized checklists
- Domains: Communication
- Ages: *CDI Words and Gestures* is for children ages 8 through 16 months. *CDI Words and Sentences* is for children 16 through 30 months.
- Scores: Percentile scores based on age and gender
- Format: Spanish adaptation available. It does not yield a standard score.
- User Qualifications: Master's-level degree in Psychology or Education or the equivalent in a related field with relevant training in assessment. Or: Verification of membership in, or certification by, a professional association recognized by The Psychological Corporation to require training and experience in a relevant area of assessment consistent with the expectations outlined in the 1985 *Standards for Educational and Psychological Testing*.
- Ordering Information: Communication Skill Builders
The Psychological Corporation
PO Box 839954
San Antonio, TX 78283-3954
800/211-8378
FAX: 800-232-1223
www.PsychCorp.com

Mullen's Scales of Early Learning

- Author: Eileen M. Mullen
- Year: 1995
- Assessment Type: A comprehensive developmental assessment that is intended for children of all ability levels. This tool is used in conjunction with the Vineland Social-Emotional Early Childhood Scales to provide a complete developmental evaluation.
- Domains: Gross Motor; Visual Reception; Fine Motor; Expressive Language and Receptive Language.
- Ages: Birth to 5 years, 8 months
- Scores: T scores, percentile ranks; age equivalents
- Standardization: Sample included 1,231 children (0 to 38 months) stratified by age, gender, race, parental occupation, and urban/rural residence. Subjects were selected from over 100 sites representing all major geographic regions of the US.
- Validation: Reliability for internal consistency ranges from median-.75 in Fine Motor to median-.91 in Early Learning Composite. The test-retest ranges from .82 in receptive language to .96 in gross motor for the 1-25 month group; and .71 in expressive language to .79 in fine motor for the 25-56 month group. (AGS)
- User Qualifications: User has completed a recognized graduate training program in psychology with appropriate coursework and supervised practical experience in the administration and interpretation of clinical assessment instruments; OR administrators should have completed graduate training and have experience in clinical infant assessment.
- Ordering Information: American Guidance Service
4201 Woodland Road
PO Box 99
Circle Pines, MN 55014-1796
800/328-2560
FAX: 800/471-8457
www.agsnet.com

Neonatal Behavioral Assessment Scale (NBAS), 3rd Edition

- Authors: T. Berry Brazelton & J. Kevin Nugent.
- Year: 1996
- Assessment Type: This instrument assesses a broad range of neonatal behaviors. It's goal is to identify children who are at risk and determine which of the children require early intervention. It is appropriate for at risk, atypical, and normal infants.
- Ages: Newborns up to two months. Domains: **28** behavioral items and 18 reflex items. It assesses different subsystems. The items are grouped into six behavior clusters (habituation, autonomic, motor, state organization, state regulation, and social-interactive behavior) and one reflex cluster.
- Scores: Scores on the behavioral scale are rated on a 9-point scale; reflex is scored on a 3-point scale. Performance on each dimension can be described as optimal, normal, or inadequate.
- Standardization: Formulated in 1973, by anthropologist, pediatrician, and psychologists, the NBAS has been used extensively in research and practice. One concern has been the lack of norming. For the first edition only 54 healthy, problem-free infants from a single hospital were used in the norm sample. However, an effort is underway to establish a representative normative base comprising healthy, problem-free infants. (Wodrich, 1997).
- Validation: Validity questions have been approached by predictive criterion-related test. When compared with 18 month scores on the Bayley Scales of Infant Development for both term and pre-term infants, the recovery curve scores were related significantly to mental and motor performance on the Bayley Scales of Infant Development; from 42% to 63% variance on the 18 month scores was predicted by the NBAS. (O'Donnell, 1996)
- User Qualifications: Examiners should have an adequate background in infant development in order to interpret the infant's behavior. Certification as an NBAS examiner involves both self-training and reliability training.
- Ordering Information: Riverside Publishing
425 Spring Lake Drive
Itasca, IL 60143-2079
800/323-9540 (orders)
800/767-8420 (general business) OR www.riverpub.com

Peabody Developmental Motor Scales (PDMS)

- Authors: M. Rhonda Folio, Rebecca Fewell
- Year: 1983
- Assessment Type: A motor development program that provides both an in-depth norm-referenced standardized assessment and instructional programming. This instrument requires an additional developmental evaluation/assessment tool to complete eligibility determination.
- Ages: Birth to 6 years, 11 months
- Domains: Fine motor: grasping, hand use, eye-hand coordination, and finger dexterity; and Gross motor: reflexes, balance, nonlocomotor, locomotor, receipt and propulsion.
- Scores: Scaled scores (z-scores, T-scores, developmental motor quotients), age scores, basal and ceiling age levels
- Standardization: Sample of 617 children stratified by age, race, gender, and regional distribution.
- Validation: Concurrent validity between the PDMS Fine Motor total and the Bayley Mental and Psycho-Motor Scales are .78 and .36 respectively. (Selected Tools)
- User Qualifications: May be administered by a wide variety of persons experienced with children once procedures have been learned; agreement reliability with an experienced examiner (85%) is recommended.
- Ordering Information: Riverside Publishing
425 Spring Lake Drive
Itasca, IL 60143-2079
800/323-9540 (orders)
800/767-8420 (general business)
www.riverpub.com

Pediatric Evaluation of Disability Inventory (PEDI)

- Author: Stephen M. Haley, Wendy J. Coster, Larry H. Ludlow, Janet T. Haltiwanger, and Peter J. Andrellos Year: 1992
- Assessment Type: A criterion-based assessment that provides a descriptive measure of function in children with a variety of disabilities, especially those with physical and cognitive disabilities. This instrument requires an additional developmental evaluation/assessment tool to complete eligibility determination.
- Ages: 6 months to 7.5 years
- Domains: Three content domains: (1) self-care, (2) mobility, and (3) social function
- Scores: Standard and scaled performance scores
- Standardization: 412 children and families in MA, CT, and NY, stratified by age, gender, race and origin, level of parent education, community size and family marital and socioeconomic status.
- Validation:
- User Qualifications: Should be administered by a professional with background in pediatrics, experience with young children with disabilities and an understanding of tests and measures.
- Ordering Information: The Psychological Corporation
PO Box 839954
San Antonio, TX 78283-3954
800/211-8378
FAX: 800-232-1223
www.PsychCorp.com

Preschool Language Scale-3 (PLS-3)

- Author: Irla Lee Zimmerman, Violette G. Steiner, Roberta Evatt Pond
- Year: 1992
- Assessment Type: A standardized assessment. This instrument requires an additional developmental evaluation/assessment tool to complete eligibility determination.
- Age: Birth to 6 years
- Accommodation: Suggested modifications for children with physical or hearing impairments
- Domain: Two subscales: Auditory Comprehension and Expressive Communication to assess language precursors, semantics, language structure and integrative thinking skills
- Standardization: Sample on 1200 children ages 2 weeks through 6 years, 11 months. Within each age group, 50 percent were female and 50 percent were male. A representative sample based on the 1980 US Census, 1986 update, was stratified on the basis of parent education level, geographic region, and race.
- Validation:
- Format: Spanish-language version available
- User Qualifications: Verification of a Master's degree in Psychology or Education or the equivalent in a related field with relevant training in assessment; OR Verification of membership in or certification by a professional association recognized by The Psychological Corporation to require training and experience in a relevant area of assessment consistent with the expectations outlined in the 1985 *Standards for Educational and Psychological Testing*.
- Ordering Information: The Psychological Corporation
PO Box 839954
San Antonio, TX 78283-3954
800/211-8378
FAX: 800-232-1223
www.PsychCorp.com

Sequenced Inventory of Communication Development, Revised (SICD-R)

- Authors: Dona Lea Hedrick, Ph. D, Elizabeth M. Prather, Ph. D., and Annette R. Tobin, M. S. P. A.
- Year: 1984
- Assessment Type: A norm-referenced diagnostic test that evaluates and quantifies communication skills of normal and developmentally delayed children. This instrument requires an additional developmental evaluation/assessment tool to complete eligibility determination.
- Ages: 4 to 48 months
- Domains: Receptive: sound and speech discrimination, awareness, and understanding; and Expressive: behavior (imitating, initiating, and responding) expressive measurement (length and grammatical and syntactic structures of verbal output and articulation).
- Scores: Receptive communication age; and expressive communication age. Assignment of age levels is limited to estimation of child's level of development. (Kurtz, 1996).
- Standardization: 252 children, 21 at each of 12 age levels ranging from 4 to .48 months. Subjects were representative of the general population of Seattle, WA. Children whose parents judged their language to be abnormal, who were living in bilingual home, who displayed obvious physical or mental abnormalities, who had abnormal hearing, or who had ear pathologies within six weeks prior to testing were excluded from the sample.
- Validation: Reliability for test-retest is .90; Inter-rater is .90. Reviewers emphasize construct validity only. (Selected Instruments)
- Format: Cuban-Spanish edition
- User Qualifications: Speech/language pathologists, teachers in preschool programs, special education teachers, and psychologist.
- Ordering information; Western Psychological Services
12031 Wilshire Blvd
Los Angeles, CA 90025-1251
800/648-8857
FAX: 310/478-7838
www.wpspublish.com

Syracuse Play-Based Assessment (SPBA)

- **Authors:** G. Ensher, E. Gardner, T. Bobish, C. Michaels, K. Butler, C. Reinson, D. Foertsch, and C. Cooper
- **Year:** 1999
- **Assessment Type:** A play-based assessment of early development. The SDA and its companion norm-referenced assessment, the Syracuse Play-Based Assessment (SPBA), were developed by a transdisciplinary team. The SPBA uses 1) parent report; 2) direct observation of parent-child interactions during play; 3) direct observation of the child in free play with and examiner (unfamiliar adult); and 4) interactions with the child in structured play with an examiner. It is designed for eligibility determination based on norms
- **Ages:** Birth to 36 months
- **Domains:** Neuromotor, sensation and perception, cognition, language and communication, social-emotional behavior, and adaptive behavior. Scores: Standard scores and percentile ranks
- **Accommodations:** Administration is flexible and encourages accommodating individual differences. Provides scaffolding in suggested levels of assistance for children who do not exhibit fully developed forms of skills.
- **Standardization:** Research and trial spanning 10 years support the item content, standardization procedures, reliabilities, and approximate norms; norming and validation are ongoing across the US ((1997).
- **Validation:** Not completed at this time.
- **User Qualifications:** Professional skills, knowledge of development and content of assessment manual. Training tape and workshop available.
- **Ordering Information:** Applied Symbolix, Inc.
800 N. Wells Street
Chicago, IL 60610
800/676-7551
313/787-3772
www.symbolix.com

Temperament and Atypical Behavior Scale (TABS)

- Authors: Stephen J. Bagnato, John T. Neisworth, John Salvia & Frances M. Hunt
- Year: 1999
- Assessment Type: Norm-referenced screening and assessment tool designed to identify temperament and self-regulation problems that may indicate a child's risk for developmental delay.
- Domains: Atypical behavior in four categories-detached, hypersensitive/active, underreactive, and dysregulated.
- Ages: 11-71 months
- Scores: Normative means, standard deviations, and cut-off scores for both typical and atypical samples
- Standardization: Normed on 1000 young children from diverse socioeconomic and ethnic backgrounds developing typically and atypically.
- Validation: Research validated the Regulatory Disorder Axis of the *Diagnostic Classification System: 0-3*, published by ZERO TO THREE: National Center for Infants, Toddlers, and Families.
- User Qualifications: Early childhood professionals
- Ordering information: Paul H. Brookes
PO Box 10624
Baltimore, MD 21285-0624
1-800-638-3775
Fax: 1-410-337-8539
www.brookespublishing.com

Test of Sensory Functions in Infants (TSFI)

- Authors: Georgia A. DeGangi, Ph.D, OTR and Stanley I. Greenspan. M/D.
- Year: 1989
- Assessment Type: A criterion-referenced tool designed to provide an overall measure of sensory processing and reactivity in infants with regulatory disorders, developmental delays, and those at risk for learning disorders; to be used in conjunction with other developmental test to provide an overall indicator of the child's developmental functioning.
- Ages: 4 to 18 months
- Domains: Five domains of sensory processing and reactivity: reactivity to tactile deep pressure, adaptive motor functions, visual-motor integration, ocular-motor control, and reactivity to vestibular stimulation.
- Scores: Criterion-referenced
- Standardization: Not standardized
- Validation: Criterion validated for inter-observer reliability, decision consistency reliability, and test-retest reliability using samples of normal, regulatory-disordered, and developmentally delayed infants
- User Qualifications: Not specified
- Ordering Information: Western Psychological Services
12031 Wilshire Blvd
Los Angeles, CA 90025-1251
800/648-8857
FAX: 310/478-7838
www.wpspublish.com

Transdisciplinary Play-Based Assessment (TPBA)

- Authors: Toni Linder and invited contributors
- Year: 1993
- Assessment Type: Curriculum embedded, diagnostic comprehensive model for assessing a child's developmental level, learning styles, temperament, motivation, and interactional patterns. It is not a standardized, norm-based assessment, nor is it a checklist of developmental skills.
- Ages: Infancy to 6 years of age.
- Domains: Cognitive, social-emotional communication and language, and, sensorimotor domains
- Scores: By using observation and age charts for each developmental area along with observation and summary worksheets, team members are able to identify child strengths, area of concern and area of readiness procedures for TPBA consists of six phases of flexibly administered unstructured and structured activities in which the child plays alone, with a parent/caregiver, and with a peer. A team makes observations while the child plays.
- Adaptations: The curriculum is flexible and accommodates several special needs.
- Standardization: Not standardized
- Validation: Few supporting data provided for program efficacy; however, TBPA is widely used and is endorsed in a number of states. (Bagnato, 1997)
- Ordering Information: Brookes Publishing Co.
PO Box 10624
Baltimore, MD 21285-0624
800/638-3775
FAX: 410/337-8539
www.pbrookes.com

Vineland Social-Emotional Early Childhood Scales (Vineland SEEC)

- **Authors:** Sara S. Sparrow, David A. Balla, & Domenic V. Cicchetti
- **Year:** 1998
- **Assessment Type:** The SEEC Scales identify strengths and weaknesses in specific areas of social-emotional behavior, the test results can be used to plan a program and select activities best suited to the child's needs. The data is collected through an interview with the parent or caregiver. This tool is used in conjunction with the Mullen's Scale of Early Learning to provide a complete developmental evaluation.
- **Ages:** Birth through 5 years, 11 months
- **Domains:** It consists of three scales-Interpersonal Relationships, Play and Leisure Time, and Coping Skills- and the Social-Emotional Composite.
- **Scores:** Standard scores, percentile ranks, stanines, and age equivalents
- **Standardization:** Norms were developed using data gathered from the early childhood sample (birth to 5 years, 11 months) from the Vineland ABS national tryout and standardization. The final sample was chosen from subjects that best matched the 1980 US Census data. The subjects were regrouped into 6 age groups or 200 subjects each.
- **Validation:** The results of the studies of convergent and discriminate validity, test-criterion relationships, factor analysis, and developmental progression support the construct validity as a measure of personal and social sufficiency. (Sparrow, 1998).
- **Formats:** Manual includes Blackline Masters of Report to Parents (in English and Spanish)
- **User Qualifications** User has completed a recognized graduate training program in psychology with appropriate coursework and supervised practical experience in the administration and interpretation of clinical assessment instruments.
- **Ordering Information** American Guidance Service
4201 Woodland Road
PO Box 99
Circle Pines, MN 55014-1796
800/328-2560
FAX: 800/471-8457
www.agsnet.com